

WE CLAIM AS OUR INVENTION:

- sub a1
1. A subcutaneous cavity marking device comprising:
- (a) at least one filler body comprising a resilient bioabsorbable material, and
 - (b) at least one marker.
2. The device of claim 1 wherein the at least one marker comprises a non-bioabsorbable material.
3. The device of claim 2 wherein the marker comprises a material selected from the group consisting of platinum, iridium, nickel, tungsten, tantalum, gold, silver, rhodium, titanium, alloys thereof, and stainless steel.
4. The device of claim 1 wherein the at least one marker comprises a second bioabsorbable material.
5. The device of claim 4 wherein the second bioabsorbable material comprises a polymer having a radiopaque additive.
6. The device of claim 5 wherein the radiopaque additive is selected from the group consisting of barium-containing compounds, bismuth-containing compounds, powdered tantalum, powdered tungsten, barium carbonate, bismuth oxide, and barium sulfate.
7. The device of claim 1 wherein the at least one marker is radiopaque.
8. The device of claim 1 wherein the at least one body is radiopaque.

Subai
cont

9. The device of claim 1 wherein the at least one marker is echogenic.
10. The device of claim 1 wherein the at least one body is echogenic.
11. The device of claim 1 wherein the at least one marker is mammographic.
12. The device of claim 1 wherein the at least one body is mammographic.
13. The device of claim 1 wherein the at least one body is palpable.
14. The device of claim 1 wherein the marker is located within an interior of the at least one body.
15. The device of claim 1 wherein the marker is substantially located within a geometric center of the at least one body.
16. The device of claim 1 additionally comprising a pain killing substance.
17. The device of claim 1 additionally comprising a hemostatic substance.
18. The device of claim 1 wherein the bioabsorbable material is selected from the group consisting of collagen, regenerated cellulose, synthetic polymers and synthetic proteins.
19. The device of claim 1 wherein the marker has a form of a sphere.
20. The device of claim 19 wherein the sphere is hollow.

suba/
cont.

21. The device of claim 1 wherein the marker has a form of a band.
22. The device of claim 1 wherein the marker comprises a suture.
23. The device of claim 1 wherein the marker comprises a wire.
24. The device of claim 1 wherein the marker has a distinguishing mark.
25. The device of claim 1 wherein the marker is fixedly attached to the at least one body.
26. The device of claim 25 wherein the marker is woven to the at least one body.
27. The device of claim 1 wherein the marker is radioactive.
28. The device of claim 1 wherein the at least one body is radioactive.
29. The device of claim 1 wherein the at least one body is substantially spherical.
30. The device of claim 1 wherein the at least one body is substantially cylindrical.
31. The device of claim 1 wherein the at least one body is has a substantially irregular shape.
32. The device of claim 1 wherein the at least one body is a biocompatible gel.
33. The device of claim 1 wherein the at least one body comprises a plurality of pores.

Sub a1
cont.

34. The device of claim 1 wherein the pores are configured to promote tissue growth in a preferred orientation.

35. The device of claim 1 wherein the at least one filler body additionally comprises a bio-compatible liquid.

36. A subcutaneous cavity marking device comprising a plurality of resilient bioabsorbable filler bodies, at least two of which are connected by at least one marker.

37. The device of claim 36 wherein the at least one marker is suspended through the interior of at least one of the plurality of filler bodies.

38. The device of claim 36 wherein the at least one marker is attached substantially to an outer perimeter of at least one of the plurality of bodies.

39. A method of marking a tissue cavity comprising the steps of:
- (a) suspending a marker within at least one filler body of resilient bioabsorbable material, and
 - (b) inserting the at least one filler body into the cavity.
40. The method of claim 39 wherein the step of inserting the at least one filler body into the cavity is performed percutaneously.
41. The method of claim 40 wherein the at least one filler body additionally comprises a hemostatic substance.
42. The method of claim 40 wherein the at least one filler body additionally comprises a pain-killing substance.
43. The method of claim 40 wherein the marker is radiopaque.
44. The method of claim 40 wherein the marker is echogenic.
45. The method of claim 40 wherein the at least one body is radiopaque.
46. The method of claim 40 wherein the at least one body is echogenic.
47. The method of claim 40 wherein the marker is fixedly attached to the at least one body.
48. The method of claim 39 wherein the step of inserting the at least one filler body into the cavity is performed surgically.

49. The method of claim 39 wherein the step of inserting the at least one filler body of resilient bioabsorbable material into the cavity is performed prior to the step of suspending the marker within the filler body.

50. A method of marking a tissue cavity having a margin in a mammalian body, comprising:
- (a) subcutaneously accessing the cavity via a delivery device,
 - (b) deploying a remotely detectable marker having a predetermined shape through the delivery device into the cavity,
- wherein upon delivery into the cavity the marker assumes a predetermined three-dimensional configuration so to (1) substantially fill the cavity, (2) mark the cavity margin, and (3) indicate the orientation of the marker inside the cavity.
51. The method of claim 50 wherein the marker is bioabsorbable.
52. The method of claim 50 wherein the marker is radiopaque.
53. The method of claim 50 wherein the marker is echogenic.
54. The method of claim 50 wherein the marker comprises a wire.
55. The method of claim 50 wherein the marker comprises a material selected from the group consisting of platinum, iridium, nickel, tungsten, tantalum, gold, silver, rhodium, titanium, alloys thereof, and stainless steel.
56. The method of claim 50 wherein the marker is capable of emitting radioactive energy.
57. The method of claim 50 wherein the marker is a helical coil.
58. The method of claim 50 wherein the marker defines a volume having a substantially spherical shape when the marker is deployed inside the cavity.

59. The method of claim 50 wherein the marker defines a volume comprising a substantially cylindrical shape when the marker is deployed inside the cavity.
60. The method of claim 50 wherein the marker defines a volume comprising a random shape when the marker is deployed inside the cavity.
61. The method of claim 50 wherein the wire comprises a shape memory material.
62. The method of claim 50 further comprising the step of introducing a bio-compatible liquid in the marker prior to the step of deploying the marker.
63. The method of claim 62 wherein the delivery device uses a hydraulic force to deploy the marker.
64. The method of claim 50 further comprising the step of introducing a bio-compatible liquid in the marker subsequent to the step of deploying the marker.
65. The method of claim 64 wherein the bio-compatible liquid is introduced to the marker via the delivery device.

66. A method of marking a tissue cavity comprising the steps of:

- (a) inserting the at least one filler body into the cavity, and
- (b) suspending a marker within at least one filler body of resilient bioabsorbable material, and

add